

Work Order ID 160416

160416

Page 1

Wednesday, April 26, 2017 3:00:00 PM

Item ID: D3299-3 Accept *N900040100* Setup Start *NS1*
 Revision ID: Stop *NS2*
 Item Name: Fitting
 Start Date: 4/28/2017 Start Qty: 4.00 *4* Cust Item ID:
 Required Date: 5/15/2017 Req'd Qty: 4.00 *4* Customer:
 Reference: (P.A.)SCHEDULED/S

Approvals: Process Plan: DAS Date: APR 27 2017 Tooling: Date: Run Start *NR1*
 QC: 21 9-89 Date: SPC (Y/N): Date: Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D3299	Rev C								
100	Hardinge CNC LATHE SMALL	2.21							
100									
Doosan	Memo	0.86							
Doosan Lathe	Machine as per Folio FA452 and Dwg D3299								
	Check NPT THREAD WITH SAMPLE IN TOOLING RACK UNDER D3399-1								
	FOLIO REV: W/A								
	DWG REV: C								
	Deburr								
110	QC2- Inspect parts off machine FAI/FAIB	0.00							
110									
QC	Memo	0.00							
Quality Control									

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Item ID:	D3299-3	Accept	*N900040100*	Setup	Start	*NS1*
Revision ID:					Stop	*NS2*
Item Name:	Fitting					
Start Date:	4/28/2017	Start Qty: 4.00	*4*	Cust Item ID:		
Required Date:	5/15/2017	Req'd Qty: 4.00	*4*	Customer:		
Reference:	(P.A.)SCHEDULED/S					

Approvals:	Process Plan:	Date:	Tooling:	Date:	Run	Start	*NR1*
	QC:	Date:	SPC (Y/N):	Date:		Stop	*NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120	QC8- Inspect parts - second check	0.00				<u>4</u>	<u>Ø</u>		DAS 49 9-89
120									
QC	Memo	0.00							<u>17/5/17</u>
Quality Control									
130	Outsource process-Anodize per QSI017 4.1.10.1	0.00				<u>4</u>			DAS 13 9-89
130									
Outsource4	Memo	0.00							<u>MAY 2 5 2017</u>
Outsource process - Anodize	Issue P/O: <u>36448</u> Anodize as per Dwg D3299Possible Supplier: TNM PaintMaterial release note is required								
140	Receive & Inspect for Damage & Mat'l Certs	0.00							
140									
Packaging	Memo	0.00							<u>4x SP17-6-6.</u>
Packaging	Ensure Material Release Note is attached								

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Start Date: 4/28/2017 Start Qty: 4.00 ***4*** Cust Item ID:
Required Date: 5/15/2017 Req'd Qty: 4.00 ***4*** Customer:
Reference: (P.A.)SCHEDULED/S

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150 *150* QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 0.00				4			DAS 38 9-89 JUN 07 2017
160 *160* Packaging Packaging	Identify as per dwg & Stock Location <u>5030</u> Memo	0.00 0.00				4			DAS 6 9-89 JUN 09 2017
170 *170* QC Quality Control	QC21- Final Inspection - Work Order Release Memo	0.00 0.00							17/6/12 JUN 09 2017

Picklist Print

Wednesday, April 26, 2017 2:59:59 PM

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Work Order ID: 160416

160416

Parent Item: D3299-3

D3299-3

Parent Item Name: Fitting

Start Date: 4/28/2017

Required Date: 5/15/2017

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP: A04.10.04New issueKJ/JLM
PER REV C 10-01-19 JLM VERIFIED BY:EC

IPP REV:B AS

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

M6061T6H1.000		Purchased		No		100	f	13.7300	0.1833	0.771789			
---------------	--	-----------	--	----	--	-----	---	---------	--------	----------	--	--	--

M6061T6H1 000

17-5-17

6061-T6 HexBar 1.00

Location

Loc Qty

Loc Code

MAT017

13.73

m135377

1.73

m136687

12

72

DART AEROSPACE LTD		Work Order: 160416
Description: Fitting		Part Number: D3299-3
Inspection Dwg: D3299	Rev: C	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
1.00	+/-0.030	1.006	✓		VRP	2L-10
Ø0.302	+0.005/-0.000	-306	✓		g-DIN	
0.550	+/-0.010	.551	✓			
0.63	+/-0.030	.632	✓			
2.08	+/-0.030	2.081	✓			
0.900	+/-0.010	.903	✓			
53°	+/-0.5°	53°	✓			
0.476	-0.005/+0.000	.474	✓			
MOW for 9/16"-18	Min = 0.57088 Max = 0.5743	.572	✓			
0.200	+/-0.030	.196	✓			
0.450	+/-0.010	.452	✓			
0.10	+/-0.030	.100	✓			
Length of Engagement for 1/4 NPT 0.227	+/-0.010	.231	✓		thread gauge	

Measured by: JK	Audited by: DAS 49	Preliminary Approval:
Date: 17-5-17	Date: 17/05/17	Date:

Rev	Date	Change	Revised by	Approved
A	04.09.17	New Issue	KJ/JLM	
B	05.05.25	-0.005/+0.000 added to 0.476	KJ/JLM	
C	08.07.23	Dwg Rev updated	KJ/DD	
D	08.10.24	Tolerances updated	KJ/DD	
E	12.07.31	Dwg Rev updated	KJ	

DQA: _____ Date: _____

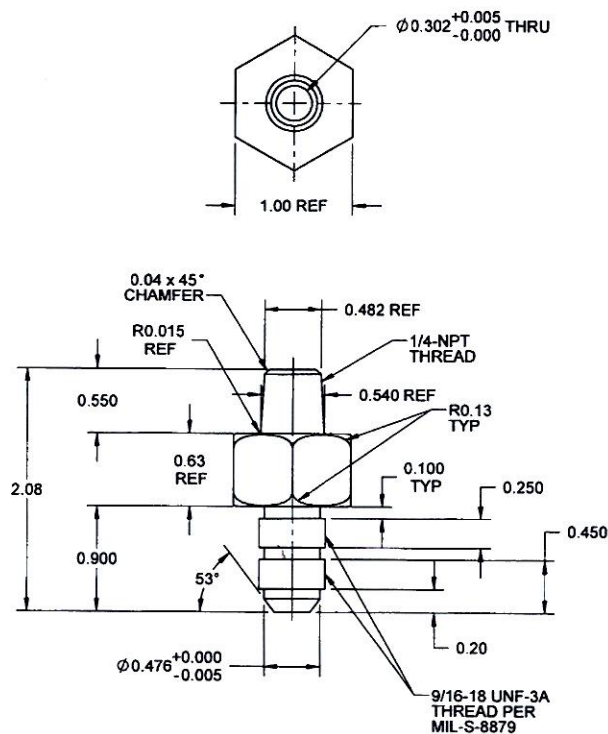


WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐				
OTHER : ☐									



SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 160416.MLS
1704-27

RELEASED
2010-01-24

D3299-3 FITTING

- NOTES:
MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUMINUM 1.00" HEX BAR
PER QQ-A-200/8 OR QQ-A-225/8 (OR AMS 4117/4128/4115/4116)
OR ASTM B211 OR ASTM B221
REF DART SPEC M6061T6H1.000
- 2) FINISH: BLUE ANODIZE PER MIL-A-8625F TYPE I OR IC OR II OR IIB CLASS 2
POSSIBLE SUPPLIER: ANODIZING TNM PAINT
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: EDGES: 0.005 TO 0.010 MAX
 - 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3299-3" & B/N USING FINE POINT PERMANENT INK MARKER
 - 7) WEIGHT: 0.20 lbs

DESIGN	RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	RF	DRAWING NO.	REV. C
MFG. APPR.	RF	D3299	SHEET 2 OF 4
APPROVED	RF	TITLE	SCALE
DE APPR.	RF	FITTING	NTS
DATE	09.12.30	COPYRIGHT © 2004 BY DART AEROSPACE LTD THIS DOCUMENT IS PROPRIETARY AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD	

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐		Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐					
OTHER : ☐									



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO36448**

Purchase Order Date 5/26/2017
PO Print Date 5/30/2017

Page Number 2 of 4

Order From :

GROUP ALTECH
2455 HALPERN

ST LAURENT, MONTREAL H4S 1N9

VC-ALT01

Ship To : DART AEROSPACE LTD

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name

Vendor Phone 514-335-3666

Ship To Contact

Ship To Phone

Ship Via: FedEx Economy collect

Ship Acct:

Buyer

Customer POID

Customer Tax #

Terms

Currency

FOB

Chantal Lavoie

10127-2607

Net 30

CAD

FOB Origin

Line Total: \$90.48

4 160416

D3299-3 FITTING

6/9/2017

Yes

6/9/2017

4.00

\$23.75 \$95.00

ANODIZE BLUE PER MIL-A-8625F TYPE I/IB/IC/II OR IIB CLASS 2

Line Total: \$95.00

5 161387

647.8510 INSERT

6/9/2017

Yes

6/9/2017

60.00

\$2.00 \$120.00

PASSIVATE PER MIL-S-5002 TYPE 6

Line Total: \$120.00

6 160493

647.7703 STRUT

6/9/2017

Yes

6/9/2017

16.00

\$9.53 \$152.48

CAD PLATE IAW QQ-P-416F CLASS I TYPE II

Line Total: \$152.48

Note:

5/30/2017



2455, Halpern, Saint-Laurent, QUÉBEC, H4S 1N9
Tel.:(514)335-3666 Fax.:(514)335-3868
Internet : www.groupaltech.com

Bon de livraison / Packing Slip
et / and
Certificat de conformité / Certificate of Compliance

Bon-Livraison / Pk.Slip # : 127780-1 05/06/2017
Bon-Commande. / W.Order # : 127780
Client P.O. # : 36054
Transport :

Envoyé à / Ship to

DART AEROSPACE LTD
1270 ABERDEEN STREET
HAWKESBURY
ONTARIO, CANADA K6A 1K7

Commandé par / Order by

DART AEROSPACE LTD (1427)
1270 ABERDEEN STREET
HAWKESBURY
ONTARIO, CANADA K6A 1K7

#	No. Job No. Réf	NoSerie / Part Number Nom Produit / Product	Traitement Process	Poids Weight	Qté Qty	Envoyé Sent	A venir BO
1	UNIT	161546 Rev.	ANODIZE BLACK PER MIL-A-8625F TY:2 CL:2 (ROHS COMPLIANT)	0.00	1	1	0
2	UNIT	161543 Rev.	ANODIZE BLACK PER MIL-A-8625F TY:2 CL:2 (ROHS COMPLIANT)	0.00	1	1	0
3	UNIT	160624 Rev.	ANODIZE BLACK PER MIL-A-8625F TY:2 CL:2 (ROHS COMPLIANT)	0.00	40	40	0
4	MIN-CH	160416 Rev.	ANODIZE BLUE PER MIL-A-8625F TY:2 CL:2 (ROHS COMPLIANT)	0.00	4	4	0
5	UNIT	647.8510 Rev.	PASSIVATION PER QQ-P-35	0.00	60	60	0
6	UNIT	647.7703 Rev.	CADMIUM YELLOW PER QQ-P-416F TY:2 CL:1 + HYDROGEN ENBRITALMENT RELIEF (BAKE)	0.00	16	16	0
7	UNIT	647.7702 Rev.	CADMIUM YELLOW PER QQ-P-416F TY:2 CL:1	0.00	6	6	0
8	UNIT	647.7701 Rev.	CADMIUM YELLOW PER QQ-P-416F TY:2 CL:1	0.00	4	4	0

DAS
38
9-20
SPH 6-6



2455, Halpern, Saint-Laurent, QUÉBEC, H4S 1N9
Tel.:(514)335-3666 Fax.:(514)335-3868
Internet : www.groupaltech.com

**Bon de livraison / Packing Slip
et / and
Certificat de conformité / Certificate of Compliance**

Bon-Livraison / Pk.Slip # : 127780-1 05/06/2017
Bon-Commande. / W.Order # : 127780
Client P.O. # : 36054
Transport :

Envoyé à / Ship to

DART AEROSPACE LTD
1270 ABERDEEN STREET
HAWKESBURY
ONTARIO, CANADA K6A 1K7

Commandé par / Order by

DART AEROSPACE LTD (1427)
1270 ABERDEEN STREET
HAWKESBURY
ONTARIO, CANADA K6A 1K7

#	<u>No. Job</u> <u>No. Réf</u>	<u>NoSerie / Part Number</u> <u>Nom Produit / Product</u>	<u>Traitement</u> <u>Process</u>	<u>Poids</u> <u>Weight</u>	<u>Qté</u> <u>Qty</u>	<u>Envoyé</u> <u>Sent</u>	<u>A venir</u> <u>BO</u>
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SP 17-6-6

Notes Additionnelles / Additional Notes

Epaisseur réelle
Actual Thickness

Inspecteur Qualité
Quality Inspector

Réçu par
Received By

PO

Nous certifions que les pièces énumérées ci-dessus ont été traitées en conformité avec votre commande et vos spécifications et rencontrent les exigences.
Notre responsabilité financière et légale ne sera pas supérieure au montant de la facture issue.

We hereby certify that the parts listed above have been process in accordance with your purchase order and specifications and are in conformance with your requirements.
Our financial and legal responsibility will not be higher than the amount of invoice.